

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Biswaroop Mukherjee et al.

Serial No. 10/599,802

Attorney Docket No. 7000-365-1A

Filed: 10/10/2006

Examiner: Nizar N. Sivji

Art Unit: 2617

For: **INDEPENDENT SCHEDULING IN A WIRELESS NETWORK**

Mail Stop Appeal Brief – Patents

Commissioner for Patents

PO Box 1450

Alexandria, VA 22313-1450

Sir:

A **REPLY BRIEF** is filed herewith in response to the Examiner's Answer mailed January 18, 2011. If any fees are required in association with this Reply Brief, the Director is hereby authorized to charge them to Deposit Account 14-1315 and consider this a petition therefor.

REPLY BRIEF

A. Introduction

In response to the Examiner's Answer mailed January 18, 2011, the Appellants provide the following remarks. In particular, none of the cited references, either alone or in combination, disclose or suggest that communication nodes in a wireless communication network independently determine communication schedules with other compatible communication nodes. As such, the Appellants request that the Board reverse the Examiner and instruct the Examiner to allow the claims.

B. Rejections

Claims 1, 6-8, 11-13, 16-18, 23-25, 28-30, 33, and 34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over European Patent No. EP 1059773 A2 to *Itai et al.* (hereinafter "*Itai*") in view of U.S. Patent Application Publication No. 2005/0232224 to *Belschner et al.* (hereinafter "*Belschner*"). Claims 2-4, 14, 15, 19-21, 31, and 32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Itai* and *Belschner* and further in view of U.S. Patent No. 6,788,702 to *Garcia-Luna-Aceves et al.* (hereinafter "*Garcia-Luna-Aceves*"). Claims 5 and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Itai*, *Belschner*, and *Garcia-Luna-Aceves* and further in view of U.S. Patent No. 6,542,476 to *Elizondo et al.* (hereinafter "*Elizondo*"). Claims 9 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Itai* and *Belschner* and further in view of U.S. Patent Application Publication No. 2003/0067873 to *Fuhrmann et al.* (hereinafter "*Fuhrmann*"). Finally, claims 10 and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Itai* and *Belschner* and further in view of U.S. Patent Application Publication No. 2004/0176098 to *Besset-Bathias et al.* (hereinafter "*Besset-Bathias*").

C. Argument

Claims 1, 6-8, 11-13, 16-18, 23-25, 28-30, 33, and 34 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Itai* in view of *Belschner*. The Appellants respectfully traverse the rejection. Initially, as argued on pages 9 through 13 of an Appeal Brief filed on November 16, 2010 (hereinafter "Appeal Brief") for the present application, claims 1, 6-8, 11-

13, 16-18, 23-25, 28-30, 33, and 34 are patentable over both *Itai* and *Belschner*. The arguments presented in the Appeal Brief are hereby incorporated into this Reply Brief in their entirety. In addition, claims 1, 6-8, 11-13, 16-18, 23-25, 28-30, 33, and 34 are patentable over the cited references for the reasons noted below.

When rejecting a claim under 35 U.S.C. § 103, the Patent Office must either show that the prior art references teach or suggest all limitations of the claim or explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art.¹ The gap between the prior art and the claimed invention may not be “so great as to render the [claim] nonobvious to one reasonably skilled in the art.”² Here, the Patent Office has failed to show where each and every limitation of the claims is taught or suggested by the prior art. Further, for those limitations of the claims that are not taught or suggested by the prior art, the Patent Office has failed to explain why those limitations would have been obvious to one of ordinary skill in the art. More specifically, claim 1 recites a method where “communication nodes in the wireless communication network independently determine communication schedules with other compatible communication nodes.” Claim 18 includes similar features.

The Appellants submit that none of the cited references, either alone or in combination, disclose or suggest that communication nodes in a wireless communication network independently determine communication schedules with other compatible communication nodes. As correctly pointed out by the Patent Office, *Itai* does not disclose this feature.³ Similarly, *Belschner* does not disclose or suggest this feature. Nonetheless, the Patent Office maintains the rejection by asserting that *Belschner* discloses this feature in the Abstract and in paragraphs [0005] and [0025].⁴ The Appellants respectfully disagree.

While *Belschner* does disclose synchronizing network nodes contained in an interconnecting network, *Belschner* does not disclose that the network nodes contained in the interconnecting network independently determine communication schedules with other network nodes.⁵ In particular, the portions in *Belschner* cited by the Patent Office disclose that when a first network node determines no activity is occurring within other network nodes, the first

¹ *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418, 82 U.S.P.Q.2d (BNA) 1385 (2007).

² *Dann v. Johnston*, 425 U.S. 219, 230, 189 U.S.P.Q. (BNA) 257, 261 (1976).

³ See Examiner's Answer mailed January 18, 2011, pages 14 and 15.

⁴ See Examiner's Answer mailed January 18, 2011, pages 14 and 15.

⁵ See *Belschner*, paragraph [0003].

network node serves as a reference node that transmits position messages for other network nodes.⁶ *Belschner* discloses that the position messages are sent according to a predetermined communication time schedule, which was determined prior to operation.⁷ According to *Belschner*, active network nodes that receive the position messages adapt their local communication time schedule to the communication time schedule.⁸ Thus, *Belschner* discloses that the active network nodes all base their communication time schedules on the same, predetermined communication time schedule, i.e., the schedule that is used to send the position messages, which is the exact opposite of what is recited in the pending claims. In particular, as noted above, the pending claims recite that communication nodes in a wireless communication network independently determine communication schedules with other compatible communication nodes. If anything, the portions of *Belschner* cited by the Patent Office teach away from this feature. As such, claims 1 and 18 are patentable over the cited references. Likewise, claims 6-8, 11-13, 16, 17, 23-25, 28-30, 33, and 34, which variously depend from either claim 1 or claim 18, are patentable for at least the same reasons along with the novel features recited therein.

Moreover, the Appellants submit that *Belschner* is not prior art against the present application. In particular, the present application is an application under 35 U.S.C. § 371 of PCT/IB05/01150, having a filing date of April 28, 2005. PCT/IB05/01150 claims priority to U.S. Provisional Application No. 60/565,950, having a filing date of April 28, 2004, and U.S. Provisional Application No. 60/618,688, having a filing date of October 14, 2004. *Belschner* has a publication date of October 20, 2005, well after the priority dates of the present application. Furthermore, the face *Belschner* indicates that *Belschner* is an application under 35 U.S.C. § 371 of PCT/EP03/03506 having a PCT filing date of April 4, 2003.

According to Chapter 706.02(f)(1) of the M.P.E.P., if an “international application was filed on or after November 29, 2000, but did not designate the United States or was not published in English under PCT Article 21(2), do not treat the international filing date as a U.S. filing date for prior art purposes. In this situation, do not apply the reference as of its international filing date, its date of completion of the 35 U.S.C. 371(c)(1), (2) and (4) requirements, or any earlier filing date to which such an international application claims benefit or priority. The reference

⁶ See *Belschner*, Abstract and paragraph [0005].

⁷ See *Belschner*, paragraphs [0005] and [0022].

⁸ See *Belschner*, paragraphs [0005] and [0009].

may be applied under 35 U.S.C. 102(a) or (b) as of its publication date.” The Appellants submit that the earliest date that *Belschner* is entitled to is the October 20, 2005 publication date. In particular, PCT/EP/03506 did not publish in English. Instead, as noted in Appendix A, which is attached herewith, the publication corresponding to PCT/EP/03506 published in another language. Therefore, for purposes of 35 U.S.C. § 102, the earliest date that *Belschner* is entitled to is October 20, 2005, which is after the earliest priority date of the present application.

Claims 2-4, 14, 15, 19-21, 31, and 32 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Itai* and *Belschner* and further in view of *Garcia-Luna-Aceves*. The Appellants respectively traverse the rejection. As detailed above, claims 1 and 18, the base claims from which claims 2-4, 14, 15, 19-21, 31, and 32 respectively depend, is patentable over *Itai* and *Belschner*. Moreover, *Garcia-Luna-Aceves* does not address the previously noted problems of *Itai* and *Belschner*. Accordingly, claims 2-4, 14, 15, 19-21, 31, and 32 are patentable over the cited references.

Claims 5 and 22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Itai* and *Belschner* and *Garcia-Luna-Aceves* and further in view of *Elizondo*. The Appellants respectively traverse the rejection. As noted above, claims 1 and 18, the base claims from which claims 5 and 22 respectively depend, are patentable over *Itai*, *Belschner*, and *Garcia-Luna-Aceves*. Furthermore, *Elizondo* does not address the previously noted problems of *Itai*, *Belschner*, and *Garcia-Luna-Aceves*. Therefore, claims 5 and 22 are patentable over the cited references.

Claims 9 and 26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Itai* and *Belschner* and further in view of *Fuhrmann*. As noted in the Appeal Brief on pages 14 and 15, claims 9 and 26 separately include features not disclosed by *Itai*, *Belschner*, and *Fuhrman*. As such, claims 9 and 26 are patentable over the cited references.

Claims 10 and 27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Itai* and *Belschner* and further in view of *Besset-Bathias*. As discussed above, claims 1 and 18, the base claims from which claims 10 and 27 depend, include features not recited in either *Itai* or *Belschner*. Moreover, *Besset-Bathias* does not address the shortcomings of *Itai* and *Belschner*. Accordingly, claims 10 and 27 are patentable over the cited references.

D. Conclusion

As set forth above, none of the cited references, either alone or in combination, disclose or suggest that communication nodes in a wireless communication network independently determine communication schedules with other compatible communication nodes. As such, the Appellants request that the Board reverse the Examiner and instruct the Examiner to allow claims 1-34.

Respectfully submitted,

WITHROW & TERRANOVA, P.L.L.C.

By:



Anthony J. Josephson
Registration No. 45,742
100 Regency Forest Drive, Suite 160
Cary, NC 27518
Telephone: (919) 238-2300

Date: March 18, 2011
Attorney Docket: 7000-365-1A

Appendix A

(12) NACH DEM VERTRAG ÜBER DIE INTERNATIONALE ZUSAMMENARBEIT AUF DEM GEBIET DES
PATENTWESENS (PCT) VERÖFFENTLICHTE INTERNATIONALE ANMELDUNG

(19) Weltorganisation für geistiges Eigentum
Internationales Büro



(43) Internationales Veröffentlichungsdatum
23. Oktober 2003 (23.10.2003)

PCT

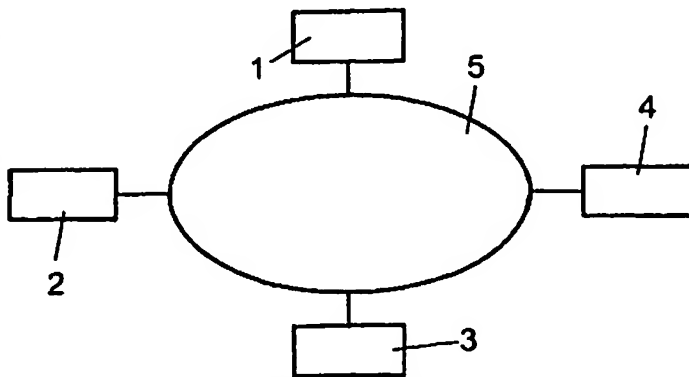
(10) Internationale Veröffentlichungsnummer
WO 03/088590 A1

- (51) Internationale Patentklassifikation: H04L 12/413 (71) Anmelder (nur für DE): PHILIPS INTELLECTUAL PROPERTY & STANDARDS GMBH [DE/DE]; Weisshausstrasse 2, 52066 Aachen (DE).
- (21) Internationales Aktenzeichen: PCT/EP03/03506 (71) Anmelder (für alle Bestimmungsstaaten mit Ausnahme von DE, US): KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (22) Internationales Anmeldedatum: 4. April 2003 (04.04.2003) (71) Anmelder (für alle Bestimmungsstaaten mit Ausnahme von US): DAIMLERCHRYSLER AG [DE/DE]; Bppllestrasse 25, 70567 Stuttgart (DE). BAYERISCHE MOTOREN WERKE AG [DE/DE]; Petuelring 130, 80788 München (DE). GENERAL MOTORS CORPORATION [US/US]; 30200 Mound Road, Warren, MI 48090-9010 (US). MOTOROLA GMBH [DE/DE]; Schatzbogen 7, 81829 München (DE).
- (25) Einreichungssprache: Deutsch (72) Erfinder; und
- (26) Veröffentlichungssprache: Deutsch (75) Erfinder/Anmelder (nur für US): FUHRMANN, Peter [DE/DE]; Jean-Bremen-Strasse 10, 52080 Aachen (DE).
- (30) Angaben zur Priorität: 102 16 984.5 16. April 2002 (16.04.2002) DE
- (71) Anmelder (für alle Bestimmungsstaaten mit Ausnahme von US): ROBERT BOSCH GMBH [DE/DE]; Wemmerstrasse 1, 70469 Stuttgart (DE). DECOMSYS - DEPENDABLE COMPUTER SYSTEMS HARDWARE AND SOFTWARE ENTWICKLUNG GMBH [AT/AT]; Stumpergasse 48/28, A-1060 Wien (AT).

[Fortsetzung auf der nächsten Seite]

(54) Title: NETWORK COMPRISING AN INTERCONNECTING NETWORK AND SEVERAL NETWORK NODES THAT ARE COUPLED TO SAID INTERCONNECTING NETWORK

(54) Bezeichnung: NETZWERK MIT EINEM VERBINDUNGS-NETZWERK AND MEHREREN MIT DEM VERBINDUNGS-NETZWERK GEKOPPELTEN NETZKNOTEN



(57) Abstract: The invention relates to a network comprising an interconnecting network and several network nodes that are coupled to said interconnecting network and are designed to adapt their local communication time schedule to the communication time schedules of at least one other network node, prior to being integrated as active network nodes. A network node to be integrated checks the activity of other network nodes and if no activity is identified, sends out positional messages for other network nodes, said messages being fixed by predetermination in its communication time schedule. If a network node cannot be integrated as a reference node, it can only be integrated as an active node if it adapts its local communication time

schedule to that of the reference node after receiving positional messages and if the check whether its own communication time schedule agrees with the communication time schedules of at least some of the active network nodes proves positive.

(57) Zusammenfassung: Die Erfindung bezieht sich auf ein Netzwerk mit einem Verbindungs-Netzwerk und mehreren mit dem Verbindungs-Netzwerk gekoppelten Netzknoten, die vor der Einbindung als aktiver Netzknoten jeweils zur Anpassung ihres lokalen Kommunikationszeitplans zu den Kommunikationszeitplänen wenigstens eines anderen Netzknoten vorgesehen sind. Ein einzubindender Netzknoten prüft die Aktivität anderer Netzknoten und sendet bei Feststellung keiner Aktivität als Referenz-Netzknoten fest in seinem Kommunikationszeitplan vorgegebene Positionsnachrichten für andere Netzknoten aus. Falls ein Netzknoten nicht als Referenz-Netzknoten eingebunden werden kann, kann er nur als aktiver Netzknoten eingebunden werden, wenn er nach Erhalt von Positionsnachrichten seinen lokalen Kommunikationszeitplan an den des Referenz-Netzknotens angepasst wird und die Prüfung auf Übereinstimmung seines eigenen Kommunikationszeitplans mit den Kommunikationszeitplänen wenigstens eines Teils der aktiven Netzknoten positiv abgeschlossen wird.

WO 03/088590 A1

BEST AVAILABLE COPY